

Pentamethyldiethylenetriamine CAS3030-47-5 PC5

Pentamethyldiethylenetriamine

English name: [N, N, N', N'', N'''-Pentamethyldiethylenetriamine](#)

Molecular formula: C₉H₂₃N₃

Molecular weight: 173.3

Section 1: Chemical Product and Company Identification

1.1 Product Name:

Pentamethyldiethylenetriamine
(PMDETA)

Catalog Codes: Not available.

CAS#: 3030-47-5

RTECS: Not available.

TSCA: Not available.

Chemical Formula: C₉H₂₃N₃

1.2 Contact Information:

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Physical and chemical properties

Pentamethyldiethylenetriamine is a colorless to pale yellow clear liquid that is readily soluble in water.

Purity: 98.0%

Viscosity (25 ° C): 2mPa.s

Relative density (20 ° C): 0.8302-0.8306

Flash point (closed loop): around 72 °C

Flash point (PMCC): 83.3 ° C

Boiling range: 196-201 ° C or 70-80 ° C (1100 Pa)

Steam pressure (21 ° C): $0.29 \times 133\text{pa}$

Freezing point: $<-20\text{ °C}$

Shanghai Qiguang Industry & Trade Co., Ltd.

Technical Data Sheet

DC PC-5

Description

DC PC-5 is a tertiary amine which strongly promotes the urea reaction in a variety of rigid and flexible polyurethane foam applications.

Applications

DC PC-5 is very effective in MDI based pour-in-place polyurethane systems such as rigid appliance. It is also used in conjunction with a trimer catalyst in PIR laminate boardstock formulations.

DC PC-5 can also be used in TDI, TDI/MDI and MDI high resiliency (HR) flexible molded foams as well as integral skin and microcellular systems.

Shelf Life:

24 Months

Standard Packaging:

☐ 170KG Steel Drum

☐ IBC Drum is recommended.

Items Spec

Content□Wt% 98 min

Moisture□Wt% 0.5 max

Typical Properties

Appearance Light yellowish Liquid

Foreign Matter Free of foreign matter

Relative Density(Water=1)Ca.0.85

Boiling Point@760 mmHg,0c 201

Water solubilty Completely Soluble

Storage Information

Qiguang Group recommends that our catalysts be stored in a dry and cool area under appropriate ventilation conditions. Each container should be closed tightly to avoid contamination with moisture or other negative influences that could change the products' performance in the end use. The optimum storage temperature is between 10 °C and 30° C. Lower and higher storage temperatures are not preferable and should be avoided.

System of law

Pentamethyldiethylenetriamine is generally obtained by N-methylation of diethylenetriamine as a raw material, and the methylation method includes

a formic acid/formaldehyde method, a formaldehyde hydrogenation method, and the like.

Characteristics and uses

Pentamethyldiethylenetriamine is a highly reactive, strong foaming polyurethane catalyst that can also be used to balance overall foaming and gelling reactions. It is widely used in a variety of polyurethane rigid foams, including polyisocyanuric acid sheet hard foam, can also improve foam fluidity, thus improving product production processes and improving product quality. Pentamethyldiethylenetriamine can also be used alone as a catalyst for polyurethane foam formulations, or with other catalysts such as DNSHA. When used alone as a hard foam catalyst, the amount is in the range of 1.0 to 2.0 parts by mass per 100 parts by mass of the polyol. In addition to its use in hard foam formulations, pentamethyldiethylenetriamine can also be used in the production of polystyrene blister foams and molded foams.

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